

# Notice of Allowability

Application No.

10/815,801

Examiner

Rosemary E. Ashton

Applicant(s)

ARAKI ET AL.

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the paper filed 5 December 2005.
2. ☒ The allowed claim(s) is/are 2,8-14 and 16.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 4/2/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

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**Election/Restrictions**

1. Applicant's election without traverse of Group II, claims 2,8-14,16 in the reply filed on 5 December 2005 is acknowledged.
2. This application is in condition for allowance except for the presence of claims 1,3-7,15,17-48 directed to inventions non-elected without traverse. Accordingly, claims 1,3-7,15,17-48 have been cancelled.

**EXAMINER'S AMENDMENT**

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Cancel non-elected, non-traversed claims 1,3-7,15,17-48.

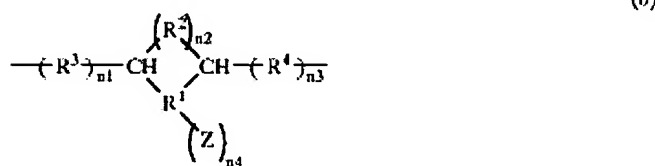
4. The following is an examiner's statement of reasons for allowance: The prior art does not teach a fluorine polymer have the formula Mb below with Z defined as (R5)-Z'

2. A fluorine-containing polymer having an aliphatic monocyclic structure in the polymer trunk chain which has a number average molecular weight of from 500 to 1,000,000 and is represented by the formula (Mb):



in which

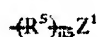
the structural unit M1 is a structural unit derived from an ethylenic monomer having 2 or 3 carbon atoms and at least one fluorine atom, the structural unit M2b is at least one structural unit which introduces an aliphatic monocyclic structure in the polymer trunk chain and is represented by the formula (b):



wherein R<sup>1</sup> is at least one hydrocarbon group selected from the group consisting of a divalent hydrocarbon

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group which has 1 to 8 carbon atoms and constitutes a ring (which may be further substituted with a hydrocarbon group or a fluorine-containing alkyl group) and a divalent hydrocarbon group having ether bond which has the sum of carbon atoms and oxygen atoms of 2 to 8 and constitutes a ring (which may be further substituted with a hydrocarbon group or a fluorine-containing alkyl group);  $R^2$  is an alkylene group which has 1 to 3 carbon atoms and constitutes a ring;  $R^3$  and  $R^4$  are the same or different and each is a divalent alkylene group having 1 or 2 carbon atoms;  $n1$ ,  $n2$  and  $n3$  are the same or different and each is 0 or 1;  $Z$  are the same or different and each is:



wherein  $Z^1$  is at least one functional group selected from the group consisting of OH group, COOH group, a derivative of carboxylic acid group and a functional group protected by a protective group which can convert the functional group to OH group by reaction with an acid;  $R^5$  is a divalent organic group;  $n5$  is 0 or 1;  $n4$  is an integer of from 1 to 3, the structural unit N is a structural unit derived from a monomer copolymerizable with the monomers to introduce the structural units M1 and M2a, and

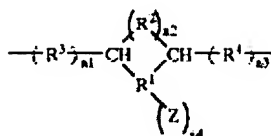
the structural units M1, M2b and N are contained in amounts of from 1 to 99% by mole, from 1 to 99% by mole and from 0 to 98% by mole, respectively.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

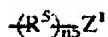
#### **Information Disclosure Statement**

5. The IDS filed 2 April 2004 contains an International Search Report listing two Japanese documents as "X" references when applied to non-elected claims 1,3,15 and 21. Additionally, English translations of the two references obtained by the Japanese Patent Office website teach a ring, such as cyclohexene or norbornene (section 17 in JP 10-231329), however, they do not have the required substitution as claimed for monomer M2b in claim 2 of the instant application. Monomer M2b has formula b below

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with  $Z$  as



wherein  $Z^1$  is at least one functional group selected from the group consisting of OH group, COOH group, a derivative of carboxylic acid group and a functional group protected by a protective group which can convert the functional group to OH group by reaction with an acid;  $R^5$  is a divalent organic group;  $n_5$  is 0 or 1;  $n_4$  is an integer of from 1 to 3, the structural unit N is a

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosemary E. Ashton whose telephone number is 571-272-1326. The examiner can normally be reached on Mon-Fri, 11:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Rosemary E. Ashton  
Primary Examiner  
Art Unit 1752

March 5, 2006  
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ROSEMARY ASHTON  
PRIMARY EXAMINER